

**Written Statement of David Huizenga  
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Before the Subcommittee on Strategic Forces  
Armed Services Committee  
United States Senate**

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Good afternoon, Mr. Chairman, Ranking Member Sessions, and Members of the Subcommittee. I am pleased to be here today to represent the Department of Energy's (DOE) Office of Environmental Management (EM). I would like to provide the Members with an overview of the EM program, key accomplishments during the past year, 2013 planned accomplishments and progress to date, the projected impacts of sequestration, and planned accomplishments under the FY 2014 Request.

## **Overview of the EM Mission**

EM's mission is to complete the safe cleanup of the environmental legacy resulting from five decades of nuclear weapons development and government-sponsored nuclear energy research. This environmental legacy includes 88 million gallons of some of the world's most dangerous radioactive wastes, thousands of tons of spent nuclear fuel (SNF), over ten thousand containers of excess plutonium and uranium, over five thousand contaminated facilities, millions of cubic meters of contaminated soil and billions of gallons of contaminated groundwater. As the largest environmental cleanup program in the world, EM was charged with the responsibility of cleaning up 107 sites across the country; an area equal to Rhode Island and Delaware combined. EM has made significant progress in this cleanup mission, completing the cleanup work at 90 of the 107 sites through the end of 2012.

## **EM Cleanup Objectives**

EM continues to pursue its cleanup objectives safely within a framework of nuclear safety orders, environmental regulatory compliance commitments and best business practices. The rationale for cleanup prioritization is based on achieving the highest risk reduction benefit per radioactive content (activities focused on materials and wastes that contain the highest concentrations of radionuclides and sites with the highest radionuclide contamination). Taking many variables into account, EM has generally prioritized its cleanup activities across the EM complex as follows:

- Safety, security, and quality
- Environmental Compliance
- Radioactive tank waste stabilization, treatment, and disposal
- Spent (used) nuclear fuel storage, receipt, and disposition
- Special nuclear material consolidation, stabilization, and disposition
- High-risk soil and groundwater remediation
- Transuranic and mixed/low-level waste disposition
- Soil and groundwater remediation
- Excess facilities deactivation and decommissioning.

In addition to these priorities, EM is committed to sound technology development and deployment as a way to reduce costs and fulfill its critical mission. EM develops and implements first-of-a-kind technologies to further enhance its ability and efficiency in cleaning up radioactive waste. Through these innovations, EM and the companies that perform its cleanup work have remained world leaders in this arena. EM's work enables other crucial DOE missions to continue across the United States. For example, EM supports the non-proliferation mission of the Department by providing and managing receipts of foreign and domestic research reactor fuels from around the world. EM supports both Science and NNSA national laboratories by managing and dispositioning wastes and remediating and removing old facilities, enabling the Department to develop new capabilities. Finally, EM has consolidated nuclear materials from around the complex, reducing security requirements at a number of labs and former weapons production sites. By reducing EM's cleanup footprint, EM is lowering the cost of security, surveillance, infrastructure, and overhead costs that would otherwise continue for years to come.

Additional strategies are integrated into cleanup activities that are important to the achievement of EM cleanup progress as well as the stakeholders and states where cleanup sites are located. These strategies include development of technologies that can improve the efficiency and effectiveness of the cleanup activity, better use of contract types, options and alternatives for specific cleanup activities, and integration/optimization of shipping to disposal facilities to reduce costs. Most importantly, EM will continue to discharge its responsibilities by conducting cleanup within a "Safe Performance of Work" culture that integrates environmental, safety, health, and quality requirements and controls into all work activities. This ensures protection to the workers, public, and the environment.

## **Key Accomplishments in the Past Year**

I would like to take this opportunity to highlight a number of the Office of Environmental Management's most recent accomplishments.

### *Continuous Improvement in Integrated Safety Management*

One of my highest areas of emphasis has been in leading improvements to the organizational, safety, and security culture of EM. An organization's culture directly impacts how the organization performs. For industrial organizations, and particularly for nuclear organizations, having a strong safety and security culture is imperative for ensuring the safe and secure performance of high-quality work. It must be a fundamental value shared by all members of the organization at all levels.

In 2011, DOE accepted the Defense Nuclear Facilities Safety Board recommendation to strengthen the safety culture at the Waste Treatment and Immobilization Plant in Hanford. Recognizing the importance of this initiative we have expanded our scope to improve safety culture at all of our EM sites. Efforts in this area are ongoing, and we have trained over 1,000 senior federal and contractor managers on Leadership for a Safety Conscious Work Environment. Early indications are that we are seeing a clear recognition by managers of the need to improve the communication of expectations that flow throughout our sites and headquarters. We have also continued to improve our safety and security culture through other ongoing initiatives such as evaluating field site safety management, sharing safety lessons learned and best practices, and working to improve our security and quality assurance programs across all of EM.

Part of maintaining a strong organizational culture is embracing the concepts of continuous improvement and fostering a learning and questioning organization. While EM is focusing on efforts to improve our culture and is seeing success through our interactions with our leadership and employees at our sites, there is more work to be done, and this will continue to be a key area of focus for EM.

### *Project and Contract Management*

A second area of emphasis has been the improvement of project and contract management. EM's project and contract management has long been designated a governmental "high risk area" by the Government Accountability Office. Key EM reforms in this area include implementing policies requiring more front-end planning; ensuring federal project directors and contracting officers have access to relevant training to help enhance their project and contract management knowledge; improving cost estimating; conducting more frequent project reviews by peers and experts in project management to ensure issues are identified early and lessons

learned are being applied in real-time; selecting proper contract types; tying fee strategies to final outcomes; and restructuring our portfolio into smaller, better defined capital asset projects and non-capital operations activities.

These reforms are already bearing fruit. On February 14, 2013, GAO issued its biennial update to the high risk list. In recognition of EM's improvements in contract and project management, GAO narrowed the scope of its high risk designation, focusing on EM capital asset projects with costs greater than \$750 million. In the report, GAO recognized EM management for demonstrating "strong commitment and top leadership support for improving contract and project management." EM will continue the specific project and contract management reforms above.

The Office of Environmental Management is continuing to make progress on constructing EM's two largest projects -- the Waste Treatment and Immobilization Plant (WTP) in Richland, Washington and the Salt Waste Processing Facility in Aiken, South Carolina.

The WTP will treat and immobilize in glass the bulk of approximately 56 million gallons of radioactive waste stored in 177 underground storage tanks at the Hanford site. We have encountered several technical and management issues at the Pretreatment Facility and the High-Level Waste Facility and are working expeditiously to address them. Full construction continues on the Low-Activity Waste Facility, Analytical Laboratory and the Balance of Facilities (support facilities). The Department has determined to ramp-up construction activities in the High-Level Waste Facility in areas not impacted by technical issues.

Over the last several months, the former Energy Secretary and a number of top scientists and engineers reviewed many aspects of the WTP. Approaches are being evaluated to resolve the issues associated with criticality, hydrogen generation, erosion/corrosion, and tank mixing issues. Technical teams developed as a result of this review draw upon expertise from academia, industry, and the Department's national laboratories.

EM's second largest construction project, the Salt Waste Processing Facility, will treat the salt portion of the liquid radioactive waste inventory at the Savannah River Site. This project and is 69% complete. A pilot version of the treatment plant has been operating successfully since 2008, providing high confidence in the technical capabilities of SWPF. To date, the pilot plant has processed over 3 million gallons of tank waste. Due to delays in the delivery of key facility components meeting acceptable quality levels for nuclear facilities, including mixing vessels, SWPF is experiencing cost over-runs and schedule delays. Since the delivery of the mixing vessels last year, we are working closely with our contractor to identify the most economical and timely path for completion.

Finally, I would like to provide an update on a third important EM construction project. The Integrated Waste Treatment Unit (more commonly known as the Sodium Bearing Waste project) will treat 900,000 gallons of radioactive liquid waste stored in underground tanks at the Idaho National Laboratory. Following the completion of construction, the facility began startup testing. However, startup testing was suspended in June 2012 to allow detailed evaluation of a system pressure event that occurred during cold commissioning. EM is planning to resume facility startup operations in early 2014.

Each of these three construction projects involve the processing, treatment and immobilizing high level radioactive/hazardous waste into glass or solid carbonate. These projects have been especially challenging considering these are first-of-a-kind and one-of-a-kind facilities.

#### *Cleanup Progress*

Thanks in part to the improvements in integrated safety management, contract management, and project management, EM has achieved major cleanup successes:

- *Footprint Reduction.* In 2009, the total footprint of EM's cleanup sites was 931 square miles. Through January 2013, we have reduced that figure by 74 percent, primarily through the use of Recovery Act funding to complete the cleanup of large areas of the Hanford and Savannah River sites.
- *High Level Radioactive Waste.* We have also made significant progress in the treatment of high-level radioactive waste, which represents the most hazardous and costly component of EM's cleanup mission. At the Savannah River Site, in FY2012 we achieved closure of two high-level waste tanks—the first tanks closed at the site since 1997—and packaged a record high of 275 canisters of high level waste in a single year at the Defense Waste Processing Facility.
- *Transuranic Waste.* Finally, we continue to achieve major successes with our nation-wide program for the transportation and disposition of transuranic waste. To date, we have sent more than 11,000 shipments of this waste to the Waste Isolation Pilot Plant in Carlsbad, New Mexico for disposal.

EM has achieved significant progress. However, I would also like to provide you an update on an issue that has emerged this year. In 2005, DOE completed a tank stabilization effort designed to remove much of the liquid waste from Hanford's single shell tanks. In February, DOE found that one tank continues to leak and five other tanks are showing declining liquid level trends that may indicate leaking. Video examination of the interior of the tanks is planned in the coming months. Both the Department of Energy and the Washington State Department of Ecology agree that the leaks pose no immediate health threat. Safe storage of tank waste until

it is treated for permanent disposal is a top priority, and EM is working to further investigate the issue and evaluate appropriate corrective actions.

### **Highlights of the FY 2014 Budget Request**

The FY 2014 EM budget request totals \$5.621 billion, which is \$88.7 million less than the FY 2012 current enacted amount. The request includes a \$463 million net neutral transfer from Defense Environmental Cleanup to the Uranium Enrichment Decontamination and Decommissioning Fund for the Budget proposal to reauthorize the Fund. The request funds Defense Environmental Cleanup activities at \$5.317 billion for FY 2014. Examples of planned activities and milestones for FY 2014 by site-specific categories are:

**Idaho National Laboratory, Idaho  
(Dollars in Thousands)**

<b>FY 2012</b>	<b>FY 2014 Request</b>
\$384,669	\$365,010

Key Accomplishments Planned for FY 2014

- Process and ship approximately 4,500 cubic meters of contact-handled TRU Waste to the Waste Isolation Pilot Plant.
- Continue sodium-bearing waste treatment operations.
- Maintain tank farm and systems for delivery of sodium bearing waste until treatment is complete.

**Los Alamos National Laboratory, New Mexico**  
**(Dollars in Thousands)**

<b>FY 2012</b>	<b>FY 2014 Request</b>
\$188,161	\$219,789

Key Accomplishments Planned for FY 2014

- Support process towards completion of processing and removal of 3,706 cubic meters of above-ground TRU waste (June, 2014 milestone).
- Continue groundwater and remediation activities.
- Continue operation of new oversize modular box line and disposition of excess materials and TRU waste.
- Continue disposition of mixed low-level waste / low-level waste.
- Support decontamination, decommissioning and demolition activities for process-contaminated facilities at Technical Area-21.

**Oak Ridge Reservation, Tennessee**  
**(Dollars in Thousands)**  
**(Includes Safeguards & Security Funding)**

<b>FY 2012</b>	<b>FY 2014 Request</b>
\$218,902	\$216,827

Key Accomplishments Planned for FY 2014

- Continue shipments of Consolidated Edison Uranium Solidification Project material from the uranium-233 inventory in Building 3019A to Nevada for disposal.
- Complete planning and readiness activities for processing the remaining uranium-233 inventory in Building 2026.
- Conduct a screening characterization of the West End Mercury Area of Y-12 National Security Complex to refine estimates of the nature and extent of mercury contamination and to identify areas that will require full characterization and mitigation measures.
- Continue operations of liquid, gaseous and process waste systems at Oak Ridge National Laboratory.

- Continue Sludge Disposition Build-out Project Design at TRU Waste Processing Center for sludge stabilization.
- Continue transfers of transuranic waste to the Transuranic Waste Processing Center located at the Oak Ridge National Laboratory.
- Continue processing and disposal of contact-handled and remote-handled transuranic waste.

**Richland Site, Washington**  
**(Dollars in Thousands)**  
**(Includes Safeguards & Security Funding)**

<b>FY 2012</b>	<b>FY 2014 Request</b>
\$1,019,121	\$990,863

Key Accomplishments Planned for FY 2014

- Continue remediation of the 618-10 burial ground and continue remediation of other waste sites along the Columbia River.
- Initiate deactivation, decontamination, decommissioning and demolition of the high-risk Building 324 and the remediation of soil underneath.
- Continue deactivation and decommissioning of facilities in the Plutonium Finishing Plant complex, including deactivating and preparing for dismantlement of the above grade portions of 234-5Z, 243-Z and other facilities.
- Treat and dispose of liquid waste from site generators and dispose treated liquid effluents from the 200 Area Liquid Effluent Facility.



**Office of River Protection, Washington**  
**(Dollars in Thousands)**

<b>FY 2012</b>	<b>FY 2014 Request</b>
\$1,182,010	\$1,210,216

Key Accomplishments Planned for FY 2014

- Continue construction of Low Activity Waste, Laboratory, and Balance of Facilities and complete construction of Analytical Laboratory.
- Continue activities for the Design Completion Team to resolve WTP technical issues and align the preliminary documented safety analysis with the design to allow for resumption of HLW construction in all areas of the facility by the end of 2014.
- Continue single shell tank retrieval activities in order to complete all C Farm retrievals by the end of 2014.
- Continue AY/AZ Farm ventilation system upgrades and Feed Delivery System activities.

**Savannah River Site, South Carolina**  
**(Dollars in Thousands)**  
**(Includes Safeguards & Security Funding)**

<b>FY 2012</b>	<b>FY 2014 Request</b>
\$1,316,922	\$1,209,457

Key Accomplishments Planned for FY 2014

- Produce 100 canisters at the Defense Waste Processing Facility.
- Continue closure activities for Tanks 5 and 6.
- Process 3 million gallons of salt tank waste and dispose over 5 million gallons of low-activity waste onsite in the Saltstone Disposal Units.
- Continue construction of the Salt Waste Processing Facility.
- Continue receipt of Foreign/Domestic Research Reactor Used Nuclear Fuel and implement Augmented Monitoring and Condition Assessment Program of Used Nuclear Fuel in wet storage.
- Store and ship non-Moxable plutonium to the Waste Isolation Pilot Plant.

- Continue processing of low-level and mixed low-level radioactive waste and disposal operations in E Area.
- Continue Building 235-F Risk Reduction scope to meet Implementation Plan for Defense Nuclear Facilities Safety Board's Recommendation 2012-1.

**Waste Isolation Pilot Plant, New Mexico**  
**(Dollars in Thousands)**  
**(Includes Safeguards & Security Funding)**

FY 2012	FY 2014 Request
\$218,179	\$208,367

Key Accomplishments Planned for FY 2014

- Support transport and disposal of remote-handled and contact-handled TRU waste at the Waste Isolation Pilot Plant.
- Continue Central Characterization Project for TRU waste at Los Alamos National Laboratory, Idaho National Laboratory and Oak Ridge National Laboratory.
- Maintain capability for receipt and disposal for up to 21 shipments per week of contact-handled and remote-handled TRU for 41 weeks.

## Conclusion

Mr. Chairman, Ranking Member Sessions, and Members of the Subcommittee, I am honored to be here today representing the Office of Environmental Management. EM is committed to achieving its mission and will continue to apply innovative environmental cleanup strategies to complete work safely, on schedule, and within cost thereby demonstrating value to the American taxpayers. I am pleased to answer any questions you may have.

